

AMENDMENTS TO THE CLAIMS

1. (Allowed) A drive device for a mechanical press with a two-step speed reduction mechanism for driving a slide of the mechanical press comprising:

a drive pinion provided concentrically with a crankshaft;

a main gear mounted on said crankshaft;

intermediate gears meshing with said drive pinion; and

intermediate pinions meshing with said main gear;

wherein a plurality of said intermediate gears and said intermediate pinions are concentrically provided with each other.

2. (Allowed) A drive device for a mechanical press described in claim 1, further comprising:

a second set of intermediate gears, wherein said intermediate gears and said second set of intermediate gears are located on opposite sides of said drive pinion in symmetric positions; and

a second set of intermediate pinions, wherein said intermediate pinions and said second set of intermediate pinions are located on opposite sides of said main gear on symmetric positions.

3. (Allowed) A drive device for a mechanical press described in claim 1, further comprising:

a drive shaft having an end on which said drive pinion is provided, said drive shaft rotatably engages a hole formed on an end of said crankshaft in order to support another end of the drive shaft.

4. (Allowed) A drive device for a mechanical press described in claim 2, further comprising:

a drive shaft having an end on which said drive pinion is provided, said drive shaft rotatably engages a hole formed on an end of said crankshaft in order to support another end of the drive shaft.

5. (Currently Amended) A drive device for a mechanical press described in claim 1, further comprising a brake comprising:

a break brake shaft; and

a brake pinion formed on said brake shaft and meshing with said intermediate gears.

6. (Allowed) A drive device for a mechanical press described in claim 5, further comprising:

a second set of intermediate gears, wherein said intermediate gears and said second set of intermediate gears are located on opposite sides of said drive pinion in symmetric positions; and

a second set of intermediate pinions, wherein said intermediate pinions and said second set of intermediate pinions are located on opposite sides of said main gear on symmetric positions.

7. (Allowed) A drive device for a mechanical press described in claim 5, further comprising:

a drive shaft having an end on which said drive pinion is provided, said drive shaft rotatably engages a hole formed on an end of said crankshaft in order to support another end of the drive shaft.

8. (Allowed) A drive device for a mechanical press described in claim 6, further comprising:

a drive shaft having an end on which said drive pinion is provided, said drive shaft rotatably engages a hole formed on an end of said crankshaft in order to support another end of the drive shaft.

9. (Canceled)

10. (Allowed) A drive device for a mechanical press described in claim 1, further comprising a flywheel transmitting rotational motion to said drive pinion, wherein said drive shaft penetrates through said flywheel and said main gear.

11. (Allowed) A drive device for a mechanical press described in claim 1, further comprising a single flywheel transmitting rotational motion to said drive pinion, wherein said drive shaft penetrates through said flywheel.

12. (Allowed) A drive device for a mechanical press described in claim 1, wherein the vertical plane intersects the drive pinion.

13. (Allowed) A drive device for a mechanical press with a two-step speed reduction mechanism for driving a slide of the mechanical press comprising:

a drive pinion provided concentrically with a crankshaft;
a main gear mounted on said crankshaft;
intermediate gears meshing with said drive pinion; and
intermediate pinions meshing with said main gear;
wherein a plurality of said intermediate gears and said intermediate pinions are concentrically provided with each other; and
the intermediate gears are symmetric to each other through a vertical plane.